

REMARKS

The examiner reminded applicant that the application should make reference to the parent case. While this was done in the original transmittal sheet, evidently the amendment was not entered. Hence, applicant has now amended the specification as requested.

Claim 27 was objected to. Applicant appreciates the thoughtful comments provided in the office action. Claim 27 has been amended to meet the examiner's concern. The amendment finds support at page 4, line 24.

The examiner has rejected claims 24, 25, 27 to 30 and 35 for lack of novelty in view of US 5,849,414 (Bier et al.).

Bier et al. discloses coating compositions which are obtained by hydrolytic polycondensation of:

- a) at least on organofunctional silane, and
- b) at least one aluminum compound.

The organofunctional silanes are defined column 4, line 55 and comprise an extremely high number of different kinds of organofunctional silanes.

The aluminum compounds are more particularly defined column 6, line 14 to line 45 and also encompass an extremely great number of aluminum compounds.

Bier et al. discloses epoxyalcoxysilane among the possible useful silanes.

Bier et al. also mentions that the aluminum compound can be aluminum oxalate.

However, the specific combination of an epoxyalcoxysilane with a chelated aluminum oxalate compound is neither disclosed nor exemplified in Bier et al.

Consequently, Bier et al. fails to disclose in particular the instant composition which comprises necessarily an epoxyalcoxysilane and a chelated aluminum oxalate compound. That is, Bier et al. does not describe each and every claim limitation, arranged in the claims. See e.g., *Sandt Technology Ltd. v. Resco Metal and Plastics Corp.*, 60 USPQ2d 1091, 1094 (Fed. Cir. 2001).

Furthermore, nothing in Bier et al. would suggest to the skilled person that there is a particular interest to combine these particular compounds.

The skilled person does not find in Bier et al. any motivation which would suggest to associate in the coating composition both an epoxyalcoxysilane and a chelated aluminum oxalate compound.

As demonstrated by the present invention and in particular the examples, the combination of an epoxyalcoxysilane and a chelated aluminum oxalate compound results in coatings which very surprisingly exhibit an abrasion resistance superior to similar coatings obtained by using epoxyalcoxysilane and chelated aluminum compounds other than the chelated aluminum oxalate compounds of the present invention.

Thus, as shown in comparative example B of the present specification using fumaric acid (also a diacid) instead of oxalic acid leads to a gellification of the solution.

Nothing in Bier et al. would suggest to the skilled person that such a result could be reasonably envisaged by using a specific combination of epoxyalkoxysilane and chelated aluminum oxalate compounds.

For the above reasons, it is deemed that the claimed invention is novel and is not obvious with regard to the Bier et al. reference.

CONCLUSION

In view of the foregoing, it is submitted that the claims are in condition for allowance. Accordingly, favorable reconsideration and Notice of Allowance are courteously solicited.

A request for a three-month extension of time is submitted herewith. If the request is missing, please consider this paper to be a request for such extension and deduct any required fee from deposit account 10-1205.

Should any fees under 37 CFR 1.16-1.21 be required for any reason relating to the enclosed materials, the Commissioner is authorized to deduct such fees from Deposit Account No. 10-1205. The examiner is invited to contact the undersigned at the phone number indicated below with any questions or comments, or to otherwise facilitate expeditious and compact prosecution of the application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert M. O'Keefe", is written over a horizontal line.

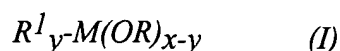
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APPENDIX
MARKED UP VERSION OF AMENDMENTS
AS REQUIRED BY RULE 121

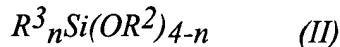
24. A plastic material having at least one face coated with a cured layer of an abrasion or scratch resistant coating composition comprising:

- (C) a component which is the reaction product with oxalic acid of at least one organometallic compound of formula:

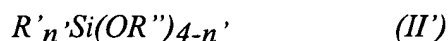


wherein M is a metal, R is H or an alkyl radical, R¹ is a chelating ligand, x is the valency of the metal, y is an integer at least equal to 1 and x-y is at least equal to 1; and

- (D) at least one organoalkoxysilane of formula:



wherein R² is an alkyl radical, R³ is an epoxidized alkyl group and n is an integer from 1 to 3, or a mixture of the organoalkoxysilane of formula (II) with an alkoxysilane of formula (II')



wherein n' is an integer from 0 to 3,

R'' is H, an alkyl radical or an alkoxyalkyl radical, and

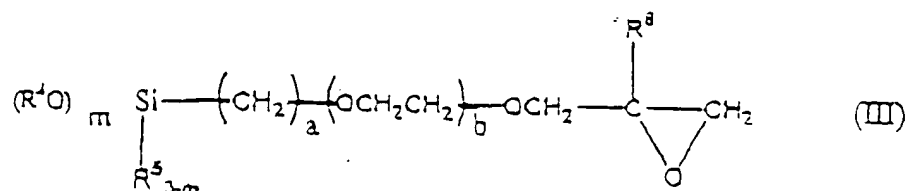
R' is a vinyl, (meth)acryl, aromatic, cyclic or aliphatic alkyl radical.

25. The plastic material substrate according to claim 24, wherein M is selected from Ti, Zr, Sc, Nb, V, Hf, Cr, Y, Al, Ge, Sn, Ta, and W.

26. The plastic material substrate according to claim 24, wherein M is Ti or Zr.

27. (Amended) The plastic material substrate according to claim 24, wherein R¹ is a ligand produced from a compound of formula $\underline{L^1COCH_2COL^2}$ [$L^1COCH_2COOL^2$] or $L^3COCH_2COOL^4$, wherein L¹, L², L³, and L⁴ are C₁-C₄ lower alkyl groups.

28. The plastic material substrate according to claim 24, wherein the organoalkoxysilane has formula:



wherein R⁴ is an alkyl or alkoxy alkyl group having 1 to 4 carbon atoms; R⁵ is an alkyl or aryl group having 1 to 6 carbon atoms; R⁶ is H or a methyl group, m is 2 or 3, a is an integer from 1 to 6 and b is 0, 1 or 2.

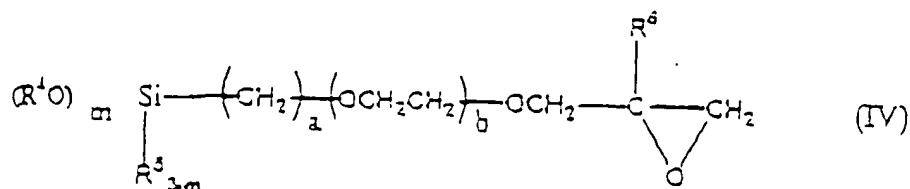
29. The plastic material substrate according to claim 28, wherein the organoalkoxysilane is selected from the group consisting of γ -glycidoxypentyltrimethoxysilane, γ -glycidoxypentyltriethoxysilane, γ -glycidoxypentylmethyldimethoxysilane, γ -glycidoxypentylmethyldiethoxysilane, and γ -glycidoxyethoxypentylmethyldimethoxysilane.

30. The plastic material substrate according to claim 24, wherein components (A) and (B) are further partially or fully hydrolyzed.

31. The plastic material substrate of claim 24, wherein the cured abrasion-resistant layer of the composition as set forth in claim 24 is deposited on top of a first abrasion-resistant coating comprising a (meth)acrylic or polysiloxane cured material.

32. The plastic material substrate of claim 31, wherein the polysiloxane coating is a coating obtained from a hydrolyzate of a silane compound containing an epoxy group and at least two alkoxy groups directly linked to silicon.

33. The plastic material substrate according to claim 32, wherein the silane compound has formula:



wherein R⁴ is an alkyl or alkoxy alkyl group having 1 to 4 carbon atoms; R⁵ is an alkyl or aryl group having 1 to 6 carbon atoms; R⁶ is H or a methyl group, m is 2 or 3, a is an integer from 1 to 6 and b is 0, 1 or 2.

34. The plastic material substrate of claim 24, wherein the cured abrasion-resistant layer of the composition as set forth in claim 24 is deposited on top of a first cured layer of an abrasion-resistant composition including at least one hydrolyzate of silane compounds containing an epoxy group and at least two alkoxy groups, colloidal silica and at least one aluminum chelate compound.

35. An ophthalmic lens comprising a plastic material substrate as set forth in claim 24.

36. An ophthalmic lens comprising a plastic material substrate as set forth in claim 34.